



STOCKER HORTICULTURAL & HYDROPONIC SUPPLIES (2004) LTD

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Heat Pumps in Hydroponics



Under the right conditions a well-designed heat pump can produce 8 times the amount of heat output to the amount of electricity it consumes. This only occurs during hot weather when little heating is required. This efficiency is called COP (Coefficient of Performance). For winter heating however, subject to area, application and ambient conditions, the COP will be at worst around 3 to 3.5.

Application

A correctly sized heat pump will keep the root zone at a temperature beneficial to the plant and improve health and mineral uptake and lessens the need for air heating to heat the root zone.

As an example, lettuce needs temperatures above 13 degrees before they are actively growing, if the sun takes until late morning to get the plants up to this temperature, that is wasted growing time which is avoidable with a heat pump.



There is also a cooling option for summer when the root zone is too hot for the plants to have optimum root function and acceptable levels of dissolved oxygen, this will reduce "heat" stress and the associated disease that follows

In effect, a Performance Plus heat pump gives the crop the best possible environment with healthier, stronger plants that have less disease with better mineral uptake. This gives you as a grower more crop turns than you would otherwise achieve.

Pricing

| <u>MODEL</u> | <u>Kw (in)</u> | <u>max/Kw (out)</u> | <u>PRICE (ex GST)</u> |
|--------------------------|----------------|---------------------|-----------------------|
| <u>SINGLE PHASE</u> | | | |
| HW150s | 1.2 | 6 | \$4532.00 |
| HW225s | 2 | 10 | \$5378.00 |
| HW275s | 2.75 | 13 | \$5933.00 |
| HW300s | 3.2 | 15 | \$6844.00 |
| HW350s | 3.5 | 18 | \$7466.00 |
| HW475s | 4.75 | 23 | \$8888.00 |
| <u>THREE PHASE UNITS</u> | | | |
| HW303 | 3.2 | 15 | \$6844.00 |
| WH353 | 3.5 | 18 | \$7466.00 |
| HW550 | 4.8 | 25 | \$9822.00 |
| HW650 | 5.5 | 28 | \$11156.00 |
| HW800 | 7.3 | 33 | \$13822.00 |
| HW1050 | 9.5 | 45 | \$14889.00 |
| HW1250 | 10 | 50 | \$18132.00 |
| HW1600 | 14 | 66 | POA |
| HW2000 | 18.75 | 75 | POA |
| HW2500 | 25 | 103 | POA |
| HW3300 | 32 | 128 | POA |



We offer a free design and costing service with ongoing advice and materials at very competitive prices.

If you have any queries or think you would like to try Hydroponics, please contact us one of the following ways:

Phone **07 883 1051**

E-mail – **stocker@xtra.co.nz**

Website – **www.hydroponics.co.nz**